



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,798	07/25/2003	Victor Hrid Pan	Pan 2 (LCNT/124991)	2658
46363 7590 07/02/2008 PATTERSON & SHERIDAN, LLP/ LUCENT TECHNOLOGIES, INC 595 SHREWSBURY AVENUE SHREWSBURY, NJ 07702				
EXAMINER VU, MICHAEL T				
ART UNIT 2617		PAPER NUMBER		
MAIL DATE 07/02/2008		DELIVERY MODE PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/627,798

**Applicant(s)**

PAN, VICTOR HRID

**Examiner**

MICHAEL T. VU

**Art Unit**

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's Remarks/Arguments filed April 03, 2008, have been fully considered but they are not persuasive.

2. On page 7 of Applicant's Remarks, Applicant argues that Fortuna and Chennakeshu fail to or suggest "determining a minimum delay offset between pseudorandom number offsets that will avoid signal collision when the pseudorandom number offsets are assigned to adjacent sectors of the same cell" on lines 17-20.

In response, the examiner has carefully reviewed the Applicant's Remark. However, Fortuna indeed discloses assigning identifiers in cellular wireless networks. More specifically, it relates to for **assigning pseudo-random offset numbers to the sectors of a code division multiple access (CDMA) wireless system** so as to **minimize the interference** between base stations (Col. 1, lines 22-27).

Additionally, Fortuna discloses each sector has a single PN for identifying itself to mobile stations. **During configuration of the CDMA system**, in which assigned one of the PNs to each sector to distinguish it from the others. More typically, assigned another number a PN offset number to the sector. The PN offset number represents where a particular PN appears in the generated series. Given the PN offset number and the seed, the sector may deduce the PN by iterating the generating algorithm. Therefore the technician typically assigns a PN offset number to each cell to identify the sector to the

Art Unit: 2617

mobile stations (Col. 2, line 50 to Col. 3, line 52), and further disclosed determining for each sector of the plurality of sectors, a measure of neighbor density for the sector (Col. 4, lines 3-36).

Furthermore, Fortuna discloses the CDMA systems, in which the data modulates a noise-like carrier and spreads the spectrum over the available bandwidth, and the spreading helps prevent **interference with the signal** (Col. 2, lines 50-65), and to **reduce interference** in the case of CDMA systems (Col. 3, line 35 to Col. 4, line 25, and Col. 6, line 51 to Col. 7, line 15).

In view of the above the rejections using Fortuna and Chennakeshu are maintained. This rejection is made FINAL.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fortuna (US 6,778,833) in view of Chennakeshu (US 6,091,936).

**Regarding claims 1 and 13**, Fortuna teaches a method for assigning pseudorandom number offsets of a synchronized timing system to sectors of communication cells in a communications network (Figures #1-2, Col. 2, line 49 to Col. 3, lines 49) comprising the steps of: determining a minimum delay offset between pseudorandom number offsets that will avoid signal collision when the pseudorandom number offsets are assigned to adjacent sectors of the same cell (Col. 4, lines 3-36);

**But Fortuna does not clearly teach** applying delay offsets of no less than the minimum delay offset between pseudorandom number offsets assigned to adjacent sectors of the same cell; applying varied delay offsets between pseudorandom number offsets assigned to sectors of different cells.

However, Chennakeshu teaches applying delay offsets of no less than the minimum delay offset between pseudorandom number offsets assigned to adjacent sectors of the same cell (Col. 3, line 36 to Col. 4, line 53); applying varied delay offsets between pseudorandom number offsets assigned to sectors of different cells, in which has timing controller for offsetting transmission to different cells and applying different offset timing to each cluster to reduce interference (Col. 3, line 36 to Col. 4, line 53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Fortuna, with Chennakeshu's such that applying delay offsets of no less than the minimum delay offset between pseudorandom number offsets assigned to adjacent sectors of the same cell; applying varied delay offsets between pseudorandom number offsets assigned to sectors of different cells, in order to

provide for transmission controlling, and to avoid or prevent the interference which occurs for any given time slot in a cellular communication.

**Regarding claims 2 and 14,** Fortuna and Chennakeshu teach the method of claim 1 and further comprising the steps of: determining that the minimum delay offset is two (2) (Col. 2, line 50 to Col. 3, line 9); and applying a delay offset of two (2) between pseudorandom number offsets assigned to sectors of the same cell (Col. 2, line 50 to Col. 3, line 9) of Fortuna.

**Regarding claims 3 and 15,** Fortuna and Chennakeshu teach the method of claim 1 and further comprising the steps of: determining that the minimum delay offset is two (2) (Col. 2, line 50 to Col. 3, line 9); and applying a delay offset of at least three (3) between pseudorandom number offsets assigned to adjacent sectors of the same cell (Col. 3, line 10 to Col. 4, line 36) of Fortuna.

**Regarding claims 4 and 16,** Fortuna and Chennakeshu teach the method of claim 1 and further comprising the steps of: applying delay offsets of more than the minimum delay offset between the pseudorandom number offsets assigned to sectors of the same cell (Col. 3, line 10 to Col. 4, line 36) of Fortuna.

**Regarding claims 5 and 17,** The combination of Fortuna and Chennakeshu teach the method of claim 4 and further comprising the steps of: determining that the minimum delay offset is two (2) (Col. 3, line 10 to Col. 4, line 36); and applying a delay offset of at least three (3) between pseudorandom number offsets assigned to sectors of the same cell (Col. 3, line 10 to Col. 4, line 36) of Fortuna.

**Regarding claims 6 and 18,** Fortuna and Chennakeshu teach the method of claim 1 and further comprising the step of: applying a varied delay offset of more than the minimum delay offset between pseudorandom number offsets assigned to sectors of different cells when the different cells are within five cells of each other (Col. 3, line 10 to Col. 4, line 36) of Fortuna.

**Regarding claims 7 and 19,** The combination of Fortuna and Chennakeshu teach the method of claim 6 and further comprising the step of: applying a varied delay offset of at least between pseudorandom number offsets assigned to sectors of different cells when the different cells are within five cells of each other (Col. 3, line 10 to Col. 4, line 36) of Fortuna.

**Regarding claim 8,** The combination of Fortuna and Chennakeshu teach the method of claim 6 and further comprising the steps of: determining that the minimum delay offset is two (2) (Col. 3, line 10 to Col. 4, line 36); and applying a delay offset of two (2) between pseudorandom number offsets assigned to adjacent sectors of the same cell (Col. 3, line 10 to Col. 4, line 36) of Fortuna.

**Regarding claim 9,** The combination of Fortuna and Chennakeshu teach the method of claim 6 and further comprising the steps of: determining that the minimum delay offset is two (2) (Col. 3, line 10 to Col. 4, line 36); and applying a delay offset of three (3) between pseudorandom number offsets assigned to adjacent sectors of the same cell (Col. 3, line 10 to Col. 4, line 36) of Fortuna.

**Regarding claim 10,** The combination of Fortuna and Chennakeshu teach the method of claim 6 and further comprising the steps of: applying a delay offset of more

than the minimum delay offset between the pseudorandom number offsets assigned to adjacent sectors of the same cell (Col. 2, line 50 to Col. 4, line 36) of Fortuna.

**Regarding claim 11**, The combination of Fortuna and Chennakeshu teach the method of claim 6 and further comprising the steps of: determining that the minimum delay offset is two (2) (Col. 2, line 50 to Col. 4, line 36); and applying a delay offset of three (3) between pseudorandom number offsets assigned to adjacent sectors of the same cell (Col. 2, line 50 to Col. 4, line 36) of Fortuna.

**Regarding claims 12 and 20**, Fortuna and Chennakeshu teach the method of claim 1, and further comprising the step of." assigning the pseudorandom number offsets to the sectors in a spatial reuse pattern (Col. 2, line 50 to Col. 4, line 36) of Fortuna.

### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the



Art Unit: 2617

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Vu whose telephone number is (571)272-8131. The examiner can normally be reached on 8:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Charles N. Appiah can be reached on 571-272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Michael Vu/  
Examiner  
AU-2617

/Charles N. Appiah/  
Supervisory Patent Examiner, Art Unit 2617